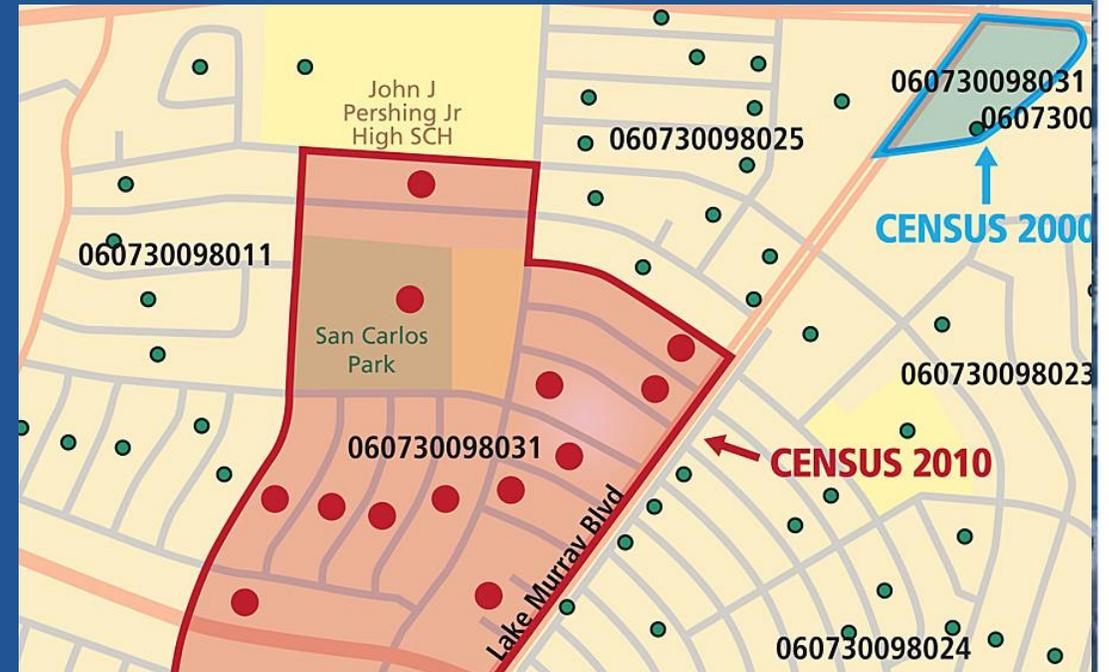


Understanding Census Geographies



Noemi Mendez
US Census Bureau

Data Dissemination and Training

- **Bring our data experts to you.**

Request a free data training for your organization.

- **Receive our Data Gems.**

These short “how-to” videos are an easy and quick way to increase your knowledge of Census data. Get them in your inbox!

- **Get access to our Courses.**

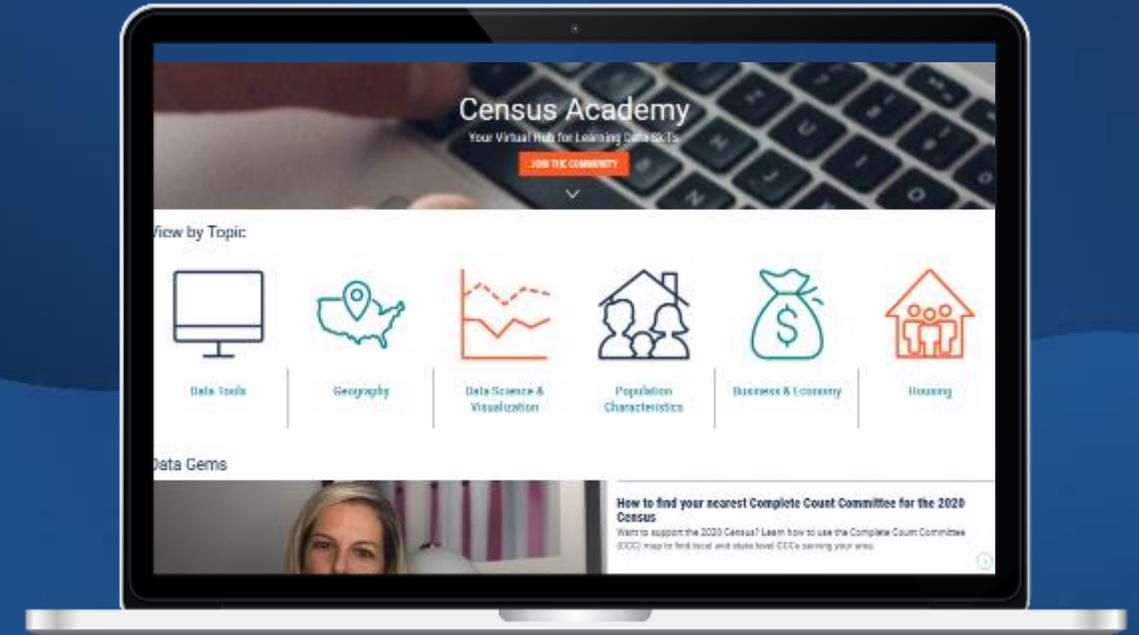
You will learn-at-your-own-pace with these video-tutorials designed for different skill levels.

- **Interact with our instructors via Webinars.**

Learn about our data releases and tools while attending these live virtual classes.



Census.gov/Academy



Contact us:

Census.askdata@census.gov

1-844-ASK-DATA

Meet Your Instructor

Noemi Mendez has been employed by the Census Bureau for over 19 years. She specializes in working with non-profits, higher education, GIS users and businesses.

Currently, as a Data Dissemination Specialist, Noemi promotes the use of census data to anyone with an interest or a need to work with this valuable information.

Noemi is available for future complimentary presentations and hands-on data workshops upon request.



Objectives

- Learn about the Census Bureau and some of the types of data collected
- Distinguish between different levels of census geography
- Locate census geography and data using data tools



Agenda

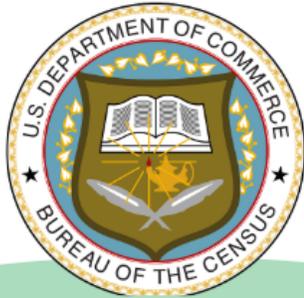
1. Census Bureau History and Data
2. Geography Overview
3. Data Tools Demo
 - a. TIGERweb
 - b. Data.Census.Gov



The United States Census Bureau

Who are we?

The U.S. Census Bureau is the federal government's largest statistical agency.



Censuses & Surveys

We conduct more than 100 censuses & surveys each year, including:

- The Decennial Census
- The American Community Survey
- The Economic Census



Our Mission

Our mission is to serve as the nation's leading provider of quality data about its people & economy.



“Data! Data! Data! I can’t make bricks without clay.”

American Community Survey (ACS)

The ACS is an ongoing survey that provides vital information on a **yearly basis** about our Nation and its people, with over 3.5 million households sampled

Some ways that ACS data is used:

- Nonprofits use ACS data to apply for grants
- Emergency planners use ACS data to determine estimates of the most vulnerable populations including seniors, young children and persons with disabilities
- Businesses use ACS data to help start or grow their businesses

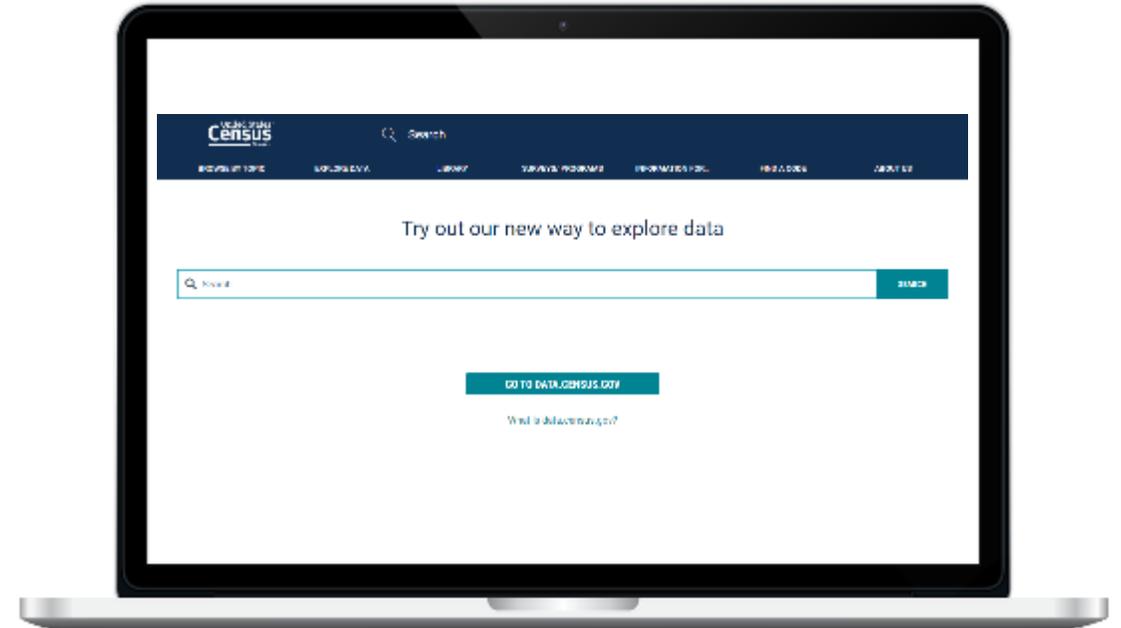
American Community Survey (ACS)

- Annual sample size of 3.5 million addresses
- Content created to meet the needs of federal government agencies
- Data collected by mailed questionnaire, in person and online
- Geographic levels: Nation to Block Group
- Data is released in the fall (1 year) and winter (5 year)
- Data is accessed via data tools on Census website

American Community Survey (ACS)

Demographic Data

- Age
- Sex
- Disability
- Language Spoken at Home
- Education



American Community Survey (ACS)

Economic Data

- Employment
- Occupation
- Work Commute
- Income
- Health Insurance

Housing Data

- Tenure
- Utilities
- Mortgage/Rent
- Occupancy
- Housing Value

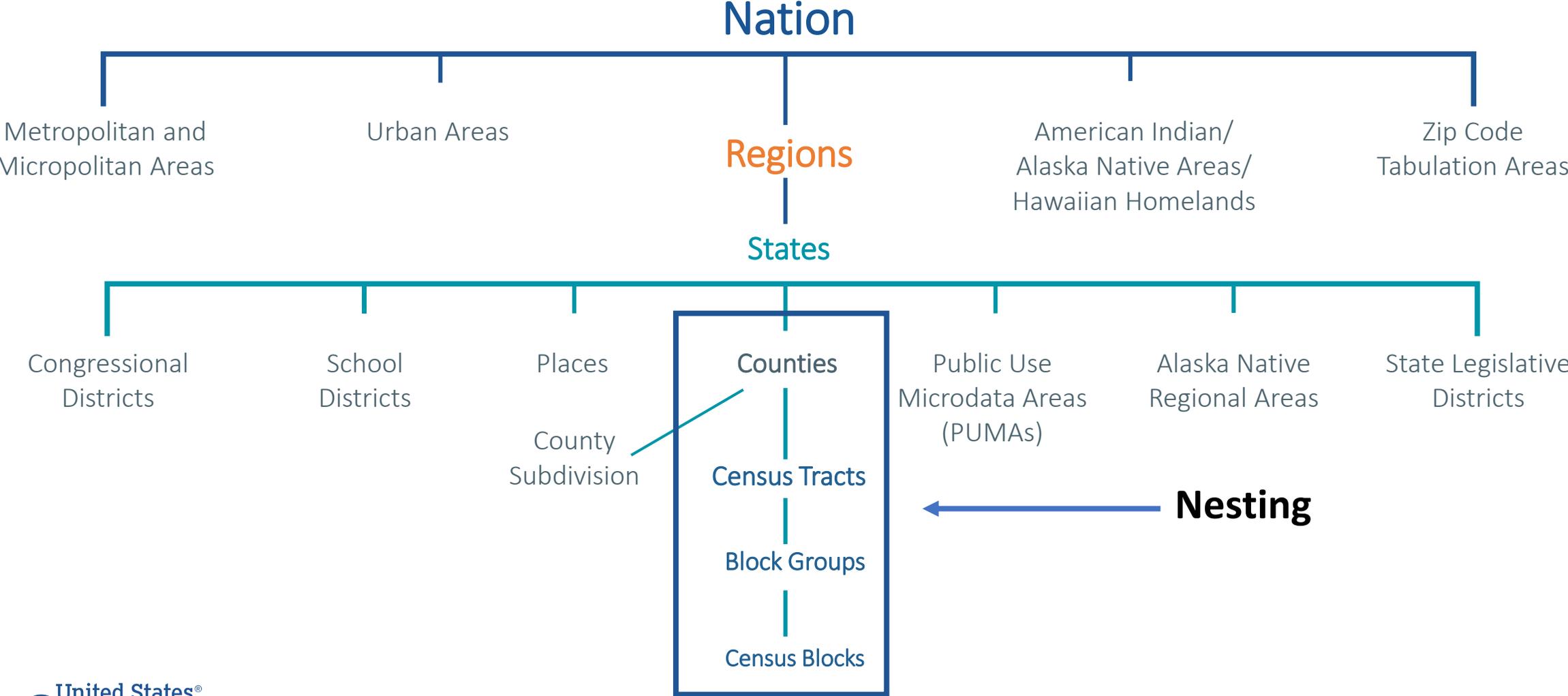


Without geography there is no census.

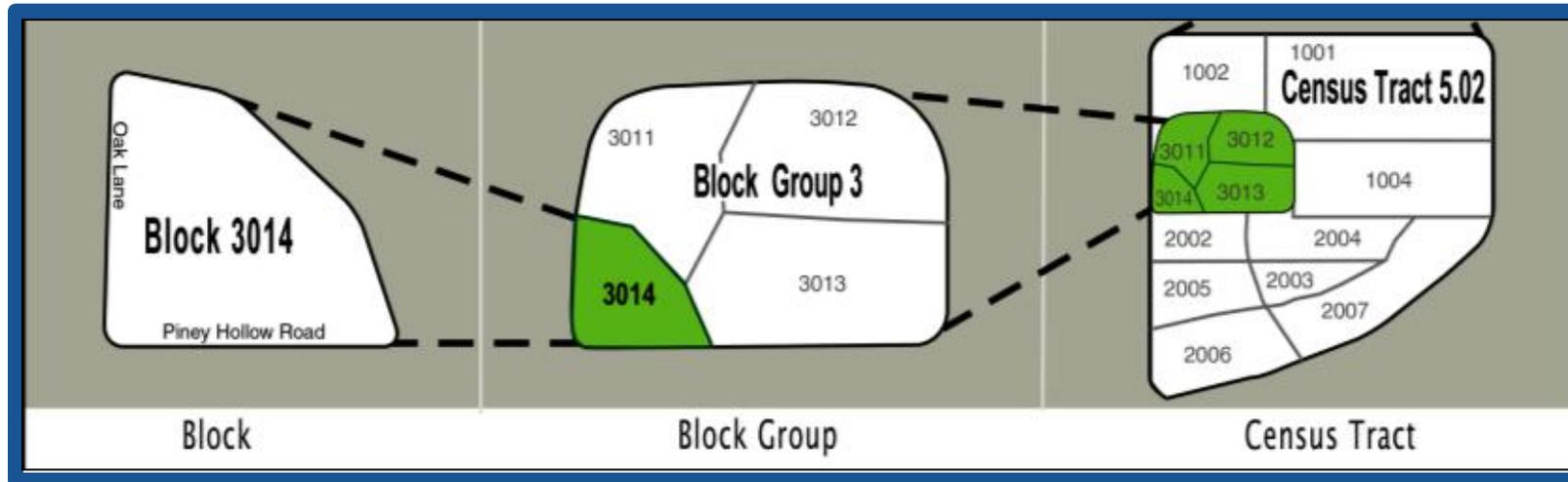
Geography is Important

- Geography plays an important role in all U.S. Census Bureau activities by providing the **framework** used to collect and publish data, including the Decennial Census and the American Community Survey (ACS) estimates.
- The Census Bureau uses **summary** levels, representing a geographic level or type, for most of its data products.
- Some geography types have legal status and are not controlled by the Bureau, including counties, places (incorporated cities), legislative and school districts, etc. The Bureau is responsible for defining several others, such as census tracts, block groups, blocks, public use microdata areas, ZCTAs, etc.

Census Geographic Hierarchy



Census Geographic Hierarchy



Blocks are not defined by population and are the smallest geographic level at which data are ever released (Decennial Census, not the ACS)

- 600 to 3,000 population
- 240 to 1,200 housing units

- 1,200 to 8,000 population (optimum 4,000)
- 480 to 3,200 housing units

Summary Levels and Codes

There are two main types of identifiers that the Census Bureau uses for geographic areas:

- **Summary levels:** represent a geographic type
- **Geographic identifiers (GEOIDs):** used to identify individual geographic areas

- 010 - United States
- 020 - Region
- 030 - Division
- 040 - State
- 050 - State→County
- 060 - State→County→County Subdivision
- 061 - State→County→Estimates Universe County Subdivision
- 067 - State→County→County Subdivision→Subminor Civil Division
- 06V - State→County→Estate
- 070 - State→County→County Subdivision→Place/Remainder
- 071 - State→County→Estimates Universe County Subdivision→Estimates Universe Place/Balance
- 07V - State→County→Estate→Place/Remainder
- 080 - State→County→County Subdivision→Place/Remainder→Census Tract
- 085 - State→County→County Subdivision→Place/Remainder→Census Tract→Urban/Rural
- 090 - State→County→County Subdivision→Place/Remainder→Census Tract→Block Group→Urban/Rural

Summary Levels and Codes Cont.

Summary levels

- Range from State/Nation to Census Block
- State-County (summary level 050) is a County within a State
- Texas-Madison County

GEOID for Madison County, Texas is 48313

- Texas = 48
- Madison County = 313
- 48313

Area	GEOID Structure	Number of Digits	Example GEO Area	Example GEOID
State	STATE	2	Pennsylvania	42
County	COUNTY	5	Philadelphia	42101
Tract	STATE+COUNTY+TRACT	11	Census Tract 1001 in Philadelphia, Pennsylvania	42101001001
Block Group	STATE+COUNTY+TRACT+BLOCKGROUP	12	Block Group 2 Census Tract 1001 in Philadelphia, Pennsylvania	4210100100102
Block	STATE+COUNTY+TRACT+BLOCKGROUP+BLOCK	15+	Block 2000 Block Group 4 Census Tract 1001 in Philadelphia, Pennsylvania	421011001022000



Data Tools: TIGERweb and Data.Census.Gov

Within Our Surveys & Programs

[About this Program](#)

[Data](#)

[Geographies](#)

[Guidance for Geography Users](#)

[Library](#)

[Technical Documentation](#)

[Updates](#)

[Contact Us](#)

Geography Program

Geography is central to the work of the Census Bureau, providing the framework for survey design, sample selection, data collection, tabulation, and dissemination. Geography provides meaning and context to statistical data.

[Read More](#)

Featured

About

Find out more about the Geography Program at the Census Bureau.



Population Clock

[View Population Clock Data](#)



USA Population

334,828,463

World Population

7,973,076,476



Top

Population estimates as of May 31, 2023

Mapping Files

[View More](#) >

TIGER/Line Shapefiles

View all the available mapping files from the Geography program.



Cartographic Boundary Files

View the newest available cartographic boundary files in shapefiles, geodatabase, and Keyhole Markup Language (KML) formats.



TIGER/Line Geodatabases

View the available TIGER/Line geodatabases from the Geography program.



[2023](#)[2022](#)[2021](#)[2020](#)[2019](#)[More](#) 

2023

2023 TIGER/Line Shapefiles

The 2023 TIGER/Line Shapefiles will be available in September 2023.

118th Congressional District Shapefiles

For the 118th Congressional District shapefiles, all legal boundaries and names are as of January 1, 2020, with the exception of the 118th Congressional Districts and the State Legislative Districts, which are as of January 1, 2023. A special county layer for the state of Connecticut is included with boundaries and names as of January 1, 2022 for reference purposes because the counties in this state have been significantly changed since 2020.

Download

 [FTP Archive by State](#)

 [FTP Archive by Layer](#)

TIGERweb

TIGERweb Applications

TIGERweb

- Contains:
- Current (BAS 2023)
 - ACS 2022
 - ACS 2021
 - 2020 Census (adjusted boundaries)
 - Current Physical Features

Legend

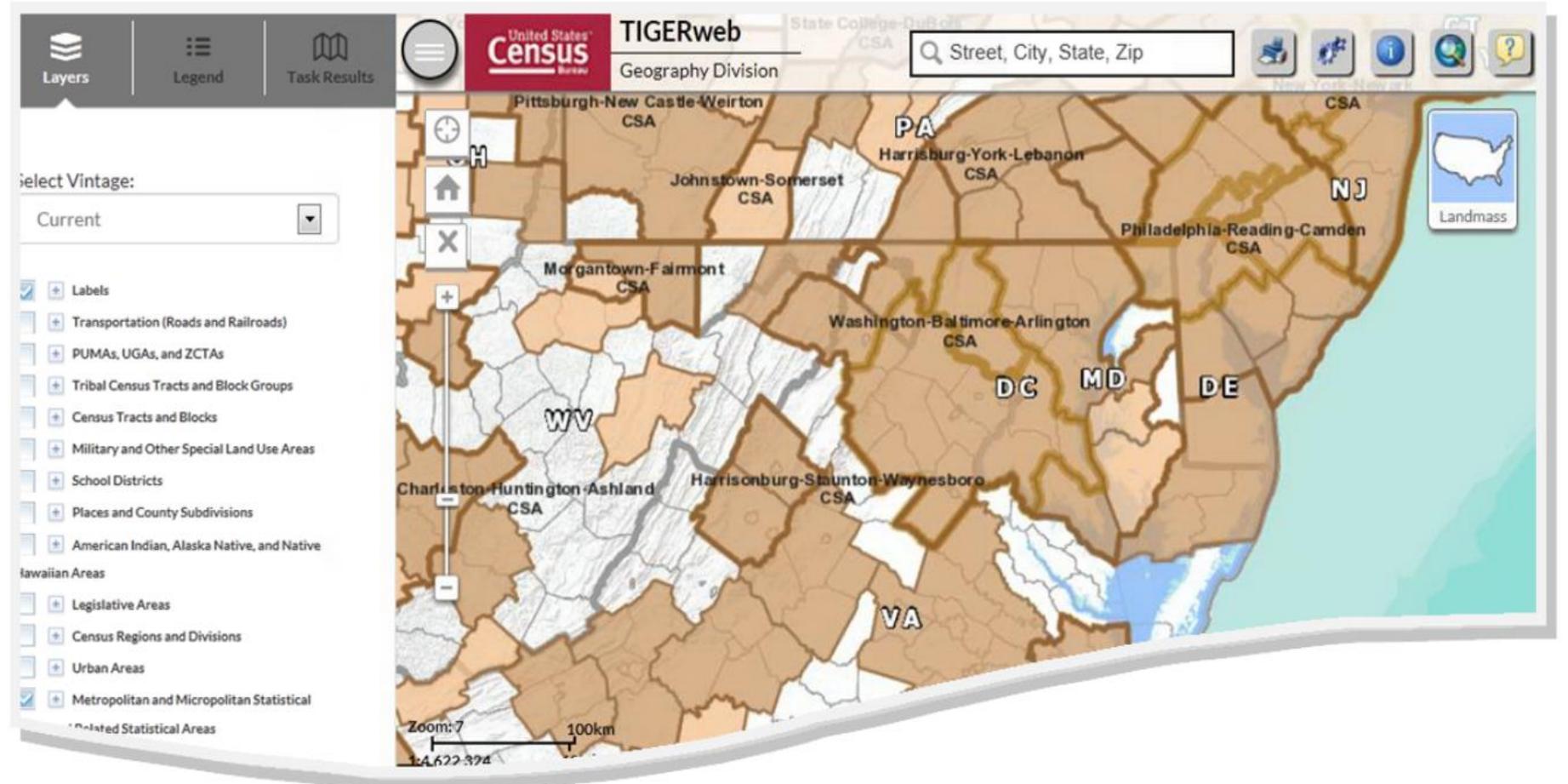
TIGERweb Decennial

- Contains:
- 2020 Census
 - Census 2010 (adjusted boundaries)
 - Census 2000 (adjusted boundaries)
 - 2020 Census Physical Features

Legend

TIGERweb Economic Census

- Contains:
- 2017 Economic Census



TIGERweb, TIGERweb Decennial, and TIGERweb Economic Census Applications



Select Vintage:

Current

- + Labels
- + Transportation (Roads and Railroads)
- + PUMAs, UGAs, and ZCTAs
- + Tribal Census Tracts and Block Groups
- + Census Tracts and Blocks
- + Military and Other Special Land Use Areas
- + School Districts
- + Places and County Subdivisions
- + American Indian, Alaska Native, and Native Hawaiian Areas
- + Legislative Areas
- + Census Regions and Divisions
- + Urban Areas
- Metropolitan and Micropolitan Statistical Areas and Related Statistical Areas
- + Hydrography
- States and Counties



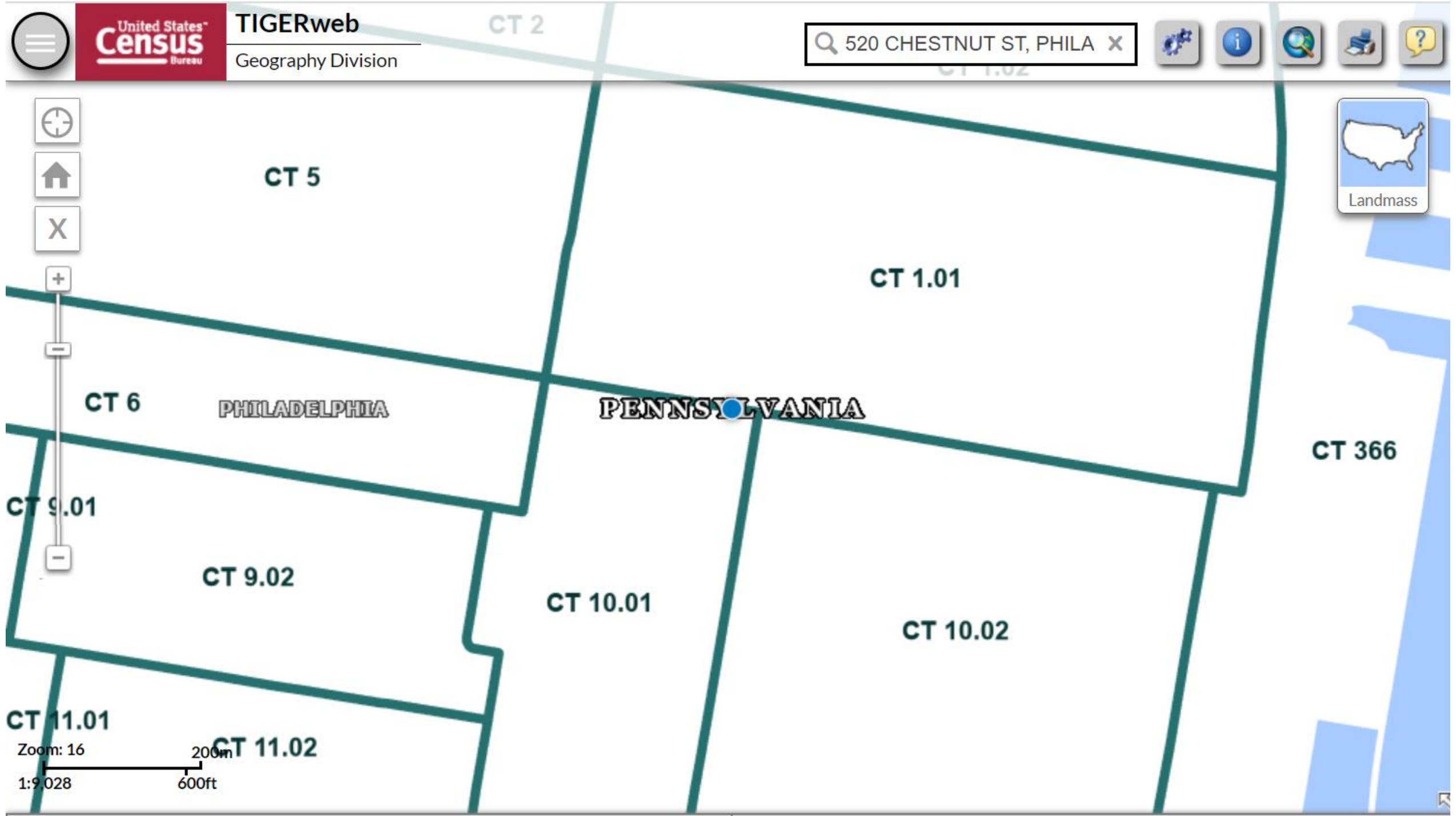
Zoom: 4
1:36,978,595 1000km
600mi

Current Extent (degs):
[-140.5615, 19.2896] [-52.6709, 56.4984]

Map Loaded.



Map navigation controls: Home, Close, Zoom In (+), Zoom Out (-)



Zoom: 16
1:9,028
200m
600ft



Landmass

BG 4

CT 5

BG 1

BG 3

BG 3

CT 1.01

BG 4

BG 5

BG 2

BG 1

CT 6

BG 2

PHILADELPHIA

PENNSYLVANIA

BG 2

BG 3
CT 366

BG 3

BG 2

CT 9.02

BG 1

BG 3
CT 10.01

CT 10.02

BG 1

BG 3

CT 11.01

BG 1

BG 2

BG 1

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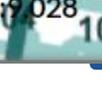
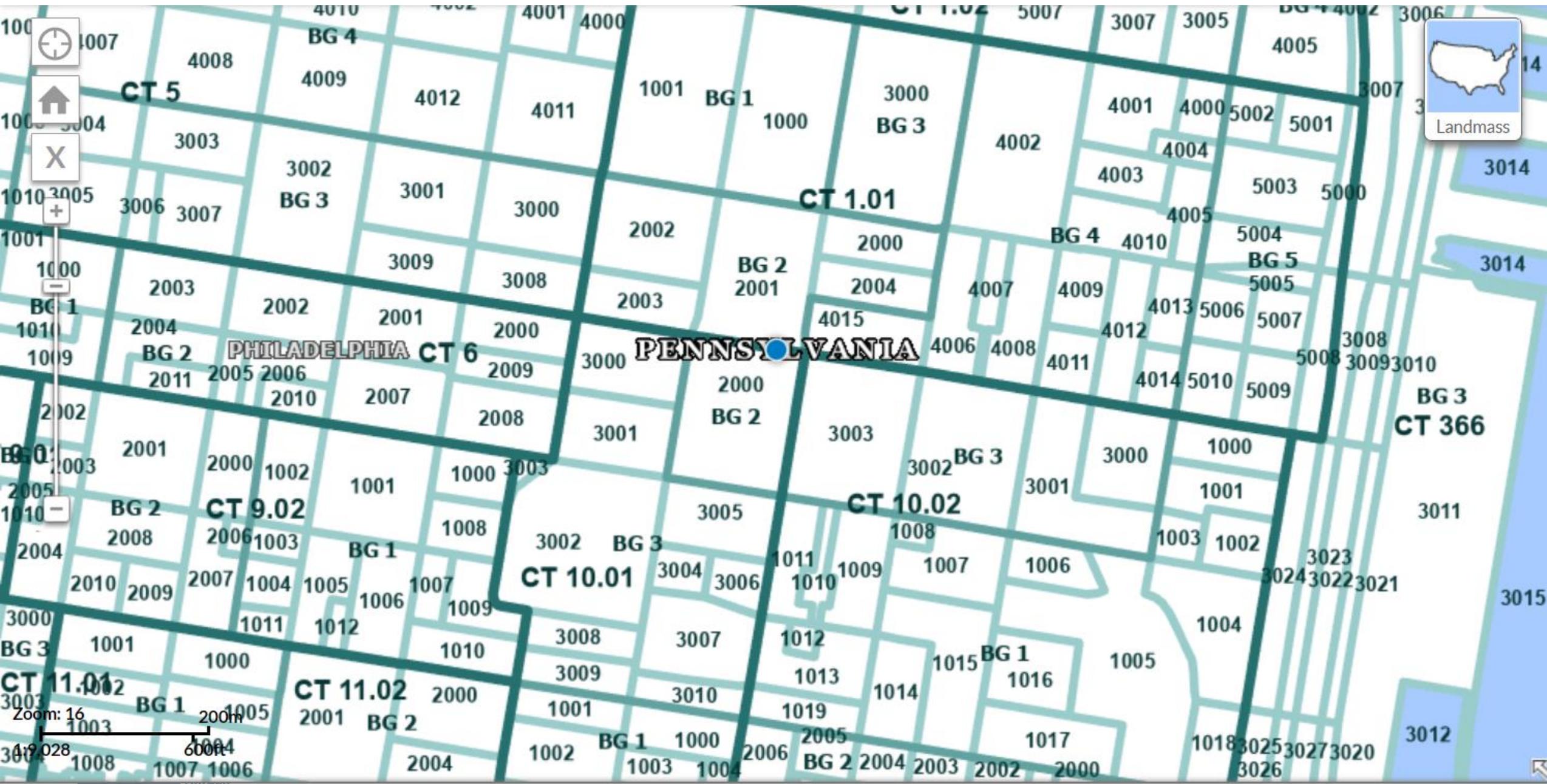
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Zoom: 16

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Zoom: 16
1.9028 600ft

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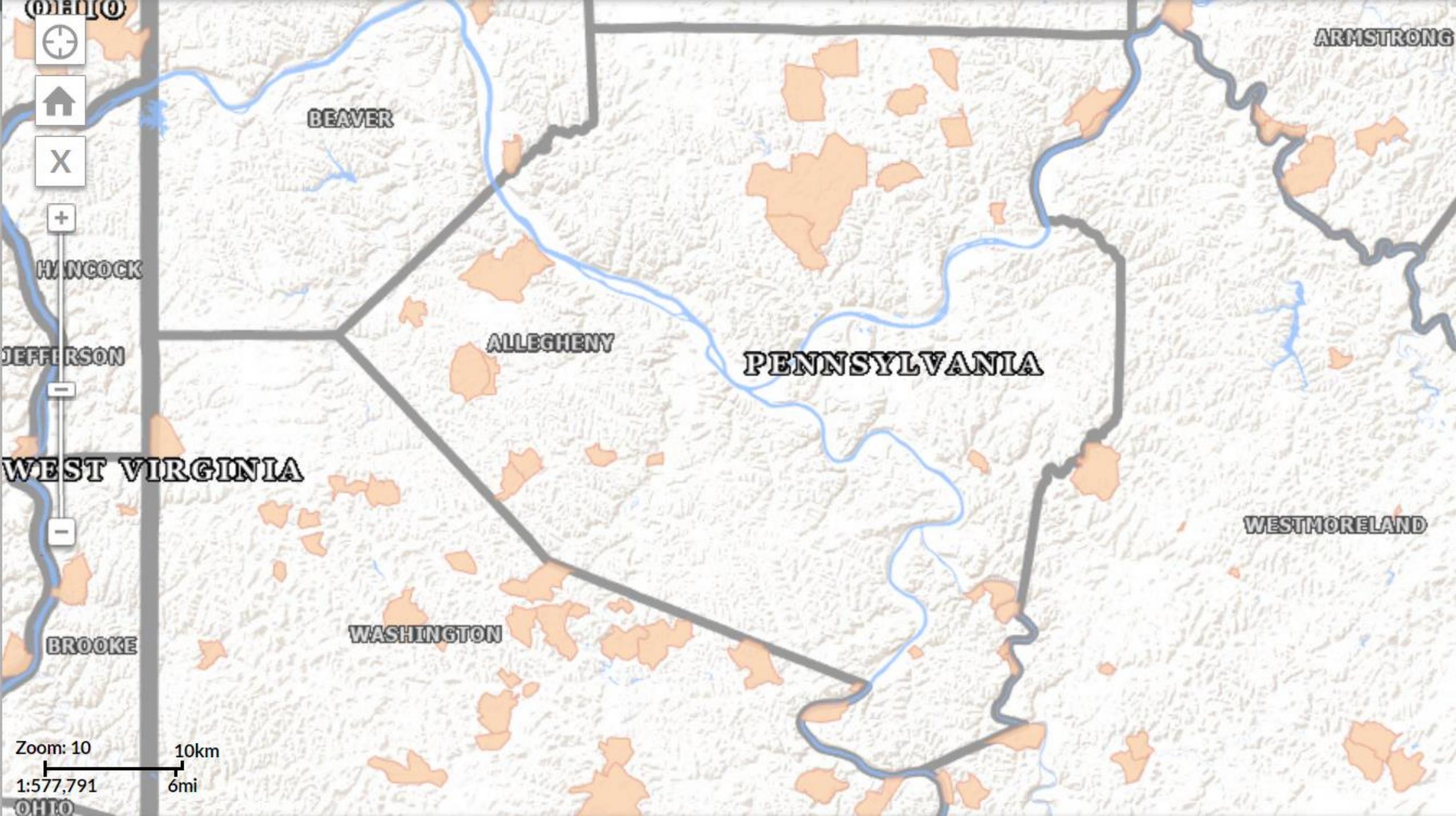
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BEAVER

ARMSTRONG

WINCOCK

JEFFERSON

ALLEGHENY

PENNSYLVANIA

WEST VIRGINIA

WESTMORELAND

BROOKE

WASHINGTON

Zoom: 10

10km

1:577,791

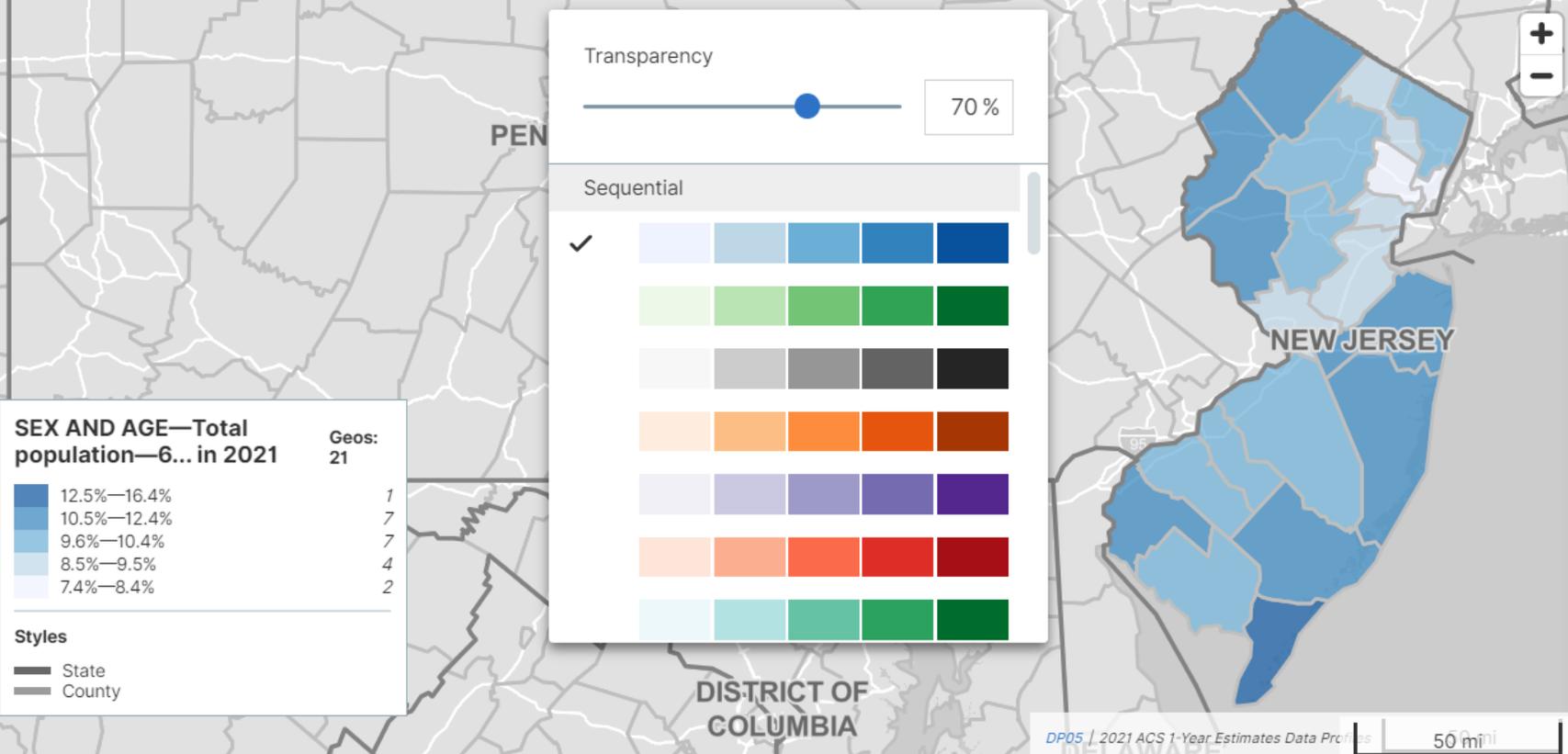
6mi

OHIO

SEX AND AGE—Total population—65 to 74 years—Percent in 21 Geos in 2021

2021 : ACS 1-Year Estimates Data Profiles

Variable(s) | Select | Clear Geos | Layer | Year | Dataset | Basemap | Boundaries | Colors | **Classes** | Identify | Table | Notes | Share



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